CLAIMS

What is claimed is:

1. A system for replacing a code image in an embedded device, comprising:

control program code responsive to at least one user command for issuing a plurality of device commands including at least one device command to replace said code image in said embedded device;

monitoring program code, asynchronous with respect to said control program code, for generating at least one event indication in response to a change of at least one predetermined attribute associated with said embedded device and forwarding said at least one event indication to said control program code; and

wherein said at least one device command replaces said code image in response to said at least one event indication.

2. The system of claim 1, wherein said control program code and said monitoring program code are independent threads of execution.

3. The system of claim 1, further comprising a target device abstraction software object, wherein said embedded device abstraction software object generates at least one event to said monitoring program code in response to information obtained from said embedded device.

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4. The system of claim 2, wherein said embedded device abstraction software object generates at least one event to said control program code in response to information obtained from said embedded device.

5. The system of claim 4, wherein said information obtained from said embedded device includes at least one value from a Management Information Base (MIB) stored on said embedded device.

6. The system of claim 3, wherein said embedded device abstraction software object further operates to receive said at least one command from said control program code, and, in response to said at least one command from said control program code, send at least one corresponding query to said embedded device.

7. The system of claim 1, wherein said monitoring program code operates to periodically check the state of at least one attribute of said embedded device.

8. The system of claim 8, wherein said monitoring program code operates to periodically check said state of said at least one attribute of said embedded device by sending at least one command to said embedded device abstraction software object.

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9. The system of claim 1, further comprising a state machine, wherein said state machine is represented in program code accessible to said control program code.

10. A method for replacing a code image in an embedded device, comprising:

issuing, responsive to at least one user command, a plurality of device commands including at least one device command to replace said code image in said embedded device, wherein said issuing is performed by control program code;

generating, asynchronous with respect to said control program code, at least one event indication in response to a change of at least one predetermined attribute associated with said embedded device and forwarding said at least one event indication to said control program code, wherein said generating is performed by monitoring program code; and

wherein said at least one device command replaces said code image in said embedded device, and wherein said at least one device command is generated responsive to said at least one event indication.

11. The method of claim 10, wherein said at least one event is generated to said monitoring program code by a target device abstraction software object, and wherein said generating of said at least one event by said embedded device abstraction software object is in

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response to information obtained from said embedded device.

12. The method of claim 11, wherein said generating by said embedded device abstraction software object of said at least one event to said control program code is responsive to obtaining information from said embedded device by said embedded device abstraction software object.

13. The method of claim 12, wherein said obtaining information from said embedded device includes obtaining at least one value from a Management Information Base (MIB) stored on said embedded device.

14. The method of claim 13, further comprising receiving, by said embedded device abstraction software object, said at least one command from said control program code, and, in response to said at least one command from said control program code, sending at least one corresponding query to said embedded device.

15. The method of claim 10, further comprising periodically checking, by said monitoring program code, the state of at least one attribute of said embedded device.

16. The method of claim 15, further comprising, periodically checking, by said monitoring program code,

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said state of said at least one attribute of said embedded device by sending at least one command to said embedded device abstraction software object.

17. The method of claim 10, further comprising maintaining a current state of said embedded device in a state machine, wherein said state machine is represented in program code accessible to said control program code.

18. A computer program product including a computer readable medium, said computer readable medium having a computer program stored thereon, said computer program for upgrading a software image on an embedded device, said computer program comprising:

control program code for issuing, responsive to at least one user command, a plurality of device commands including at least one device command to replace said code image in said embedded device;

monitoring program code for generating, asynchronous with respect to said control program code, at least one event indication in response to a change of at least one predetermined attribute associated with said embedded device and forwarding said at least one event indication to said control program code; and

wherein said at least one device command replaces said code image in said embedded device, and wherein said at least one device command is generated responsive to said at least one event indication.

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19. A system for upgrading a software image on an embedded device, said computer program comprising:

means for controlling an upgrade process, said means for controlling including means for issuing, responsive to at least one user command, a plurality of device commands including at least one device command to replace said code image in said embedded device;

means for monitoring an embedded device, wherein said means for monitoring includes means for generating, asynchronous with respect to said means for controlling, at least one event indication in response to a change of at least one predetermined attribute associated with said embedded device and forwarding said at least one event indication to said control program code; and

wherein said at least one device command replaces said code image in said embedded device, and wherein said at least one device command is generated responsive to said at least one event indication.

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